



~~Docket~~ No. 00279.166US1

Clean Version of the Amended Claims

SYSTEM AND METHOD FOR CARDIAC RHYTHM MANAGEMENT WITH
SYNCHRONIZED PACING PROTECTION PERIOD

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Please replace claims 1-5, 10-15, 18, and 20 with their corresponding claims, as amended, below:

1. (Amended) A method for operating a cardiac rhythm management device, comprising:
 - sensing rate and synchronized heart chambers through separate channels and generating sense signals upon detection of depolarization occurring in a chamber;
 - pacing the synchronized chamber upon expiration of an escape interval in accordance with a synchronized pacing mode based upon rate chamber events; and,
 - initiating a synchronized chamber protection period of predetermined duration after a synchronized chamber sense during which a pace to the synchronized chamber scheduled by the synchronized pacing mode is inhibited while the escape interval continues to run.
2. (Amended) The method of claim 1 further comprising pacing the rate chamber in accordance with a bradycardia pacing mode based upon rate chamber senses and paces.
3. (Amended) The method of claim 1 wherein the rate and synchronized chambers are ventricles.
4. (Amended) The method of claim 1 wherein the rate and synchronized chambers are atria.
5. (Amended) The method of claim 1 further comprising pacing one or more additional synchronized pacing sites in accordance with the synchronized pacing mode based upon rate chamber events and wherein pacing of each synchronized site is inhibited during the synchronized chamber protection period that is initiated by a sense or pace at the synchronized site.

10. (Amended) The method of claim 9 wherein a pace to the synchronized chamber may be triggered by the synchronized chamber sense and wherein the synchronized chamber protection period starts only after a specified delay from the synchronized chamber sense, which allows triggered pacing but prevents pacing during the vulnerable period of the synchronized chamber.

11. (Amended) A cardiac rhythm management device, comprising:
sensing channels for sensing depolarizations from heart chambers designated as a rate chamber and a synchronized chamber;
a first pacing channel for pacing the synchronized chamber;
a controller for controlling the delivery of paces in accordance with a programmed pacing mode; and,
wherein the controller is programmed to pace the synchronized chamber upon expiration of an escape interval in accordance with a synchronized pacing mode based upon rate chamber events; and,
wherein the controller is programmed to initiate a synchronized chamber protection period of predetermined duration after a synchronized chamber sense during which a pace to the synchronized chamber scheduled by the synchronized pacing mode is inhibited while the escape interval continues to run .

12. (Amended) The device of claim 11 further comprising a second pacing channel for pacing the rate chamber and wherein the controller is programmed to pace the rate chamber in accordance with a bradycardia pacing mode.

13. (Amended) The device of claim 11 wherein the rate and synchronized chambers are ventricles.

14. (Amended) The device of claim 11 wherein the rate and synchronized chambers are atria.

A2 15. (Amended) The device of claim 11 further comprising channels for pacing one or more additional synchronized pacing sites in accordance with the synchronized pacing mode based upon rate chamber events and wherein pacing of each synchronized site is inhibited during the synchronized chamber protection period that is initiated by a sense or pace at the synchronized site.

A3 18. (Amended) The device of claim 17 wherein the controller is programmed to deliver a safety pace to the rate chamber if the synchronized chamber pace is inhibited by the synchronized chamber protection period.

A4 20. (Amended) The device of claim 19 wherein a pace to the synchronized chamber may be triggered by the synchronized chamber sense and wherein the synchronized chamber protection period starts only after a specified delay from such a triggering event, which allows triggered pacing but prevents pacing during the vulnerable period of the synchronized chamber.